

Zyxel AVoIP Network Promotion Guide



Background

- More and more audio and video system are transforming their traditional Matrix Switch infrastructure to industry standard IP-based network technology. This change brings flexibility to easily scale AV networks as well as extends to longer distance.
- Traditional AV system makers are less familiar with IP-based network setup, especially with IGMP setting. Detailed IGMP parameter could easily be ignored which results major impact to system performance.
- Zyxel is a professional Ethernet switch provider with profound knowledge in IP multicasting for various applications. This document serves as a guidance for proper IGMP setting in different AVoIP scenarios.

Switch For Networked AV

mGig

2.5G

10G

1930 Series

License Required



LAN	1G/2.5G/5G/10G (XS1930) 1G/2.5G (XMG1930)
Uplink:	10G
Uplink type	10G mGig RJ45 & 10G SFP+
Models	XS1930-10/12HP/12F XMG1930-30/30HP
Type (Class)	Cloud / Smart Lite L3
High PoE Budget	375W (XS1930-12HP) 700W (XMG1930-30HP)
PoE standard	PoE, PoE+, PoE++
Networked AV mode	Yes

GS2220 Series



LAN	1G
Uplink:	1G
Uplink type	Combo (SFP/RJ45)
Models	8/8HP/24/ 24HP/48/48HP
Type (Class)	Cloud / L2 Plus
High PoE Budget	180W (8HP) 375W (24HP/48HP)
PoE standard	PoE & PoE+
Networked AV mode	Yes

XGS2220 Series



LAN	1G
Uplink	10G
Uplink type	10G mGig RJ45 & 10G SFP+
Models	30F/30/30HP/ 54/54HP/54FP
Type (Class)	Cloud / L3 Access
High PoE Budget	400W (30HP), 600W (54HP), 960W (54FP)
PoE standard	PoE, PoE+, PoE++
Networked AV mode	Yes

10G

XS3800-28



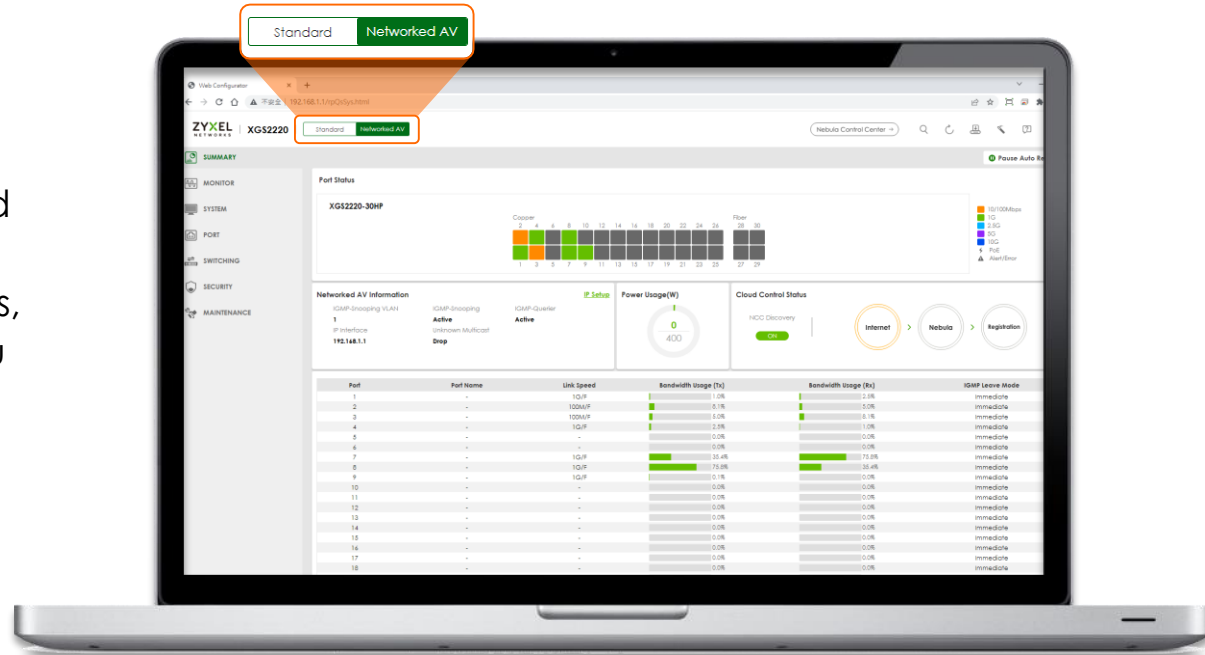
LAN	1G/2.5G/5G/10G
Uplink	10G
Uplink type	Combo (10G SFP+/10G mGig RJ45)
Type (Class)	Cloud / L3 Aggregation
Networked AV mode	Yes

mGig

10G

Networked AV Mode

It is an intuitive web interface designed with chosen Networked AV features to give you an instantly view of the current status, with a condensed function menu to help you maintain and configure with ease.



Tailor-made Experience For Networked AV

Standard Mode

Zyxel's standard Layer 3 Access Switch web interface suitable for advanced users to utilize complete switching features in complex networks.

Networked AV Mode

An intuitive web interface designed with chosen Networked AV features to give you an instantly view of the current status, with a condensed function menu to help you maintain and configure with ease.

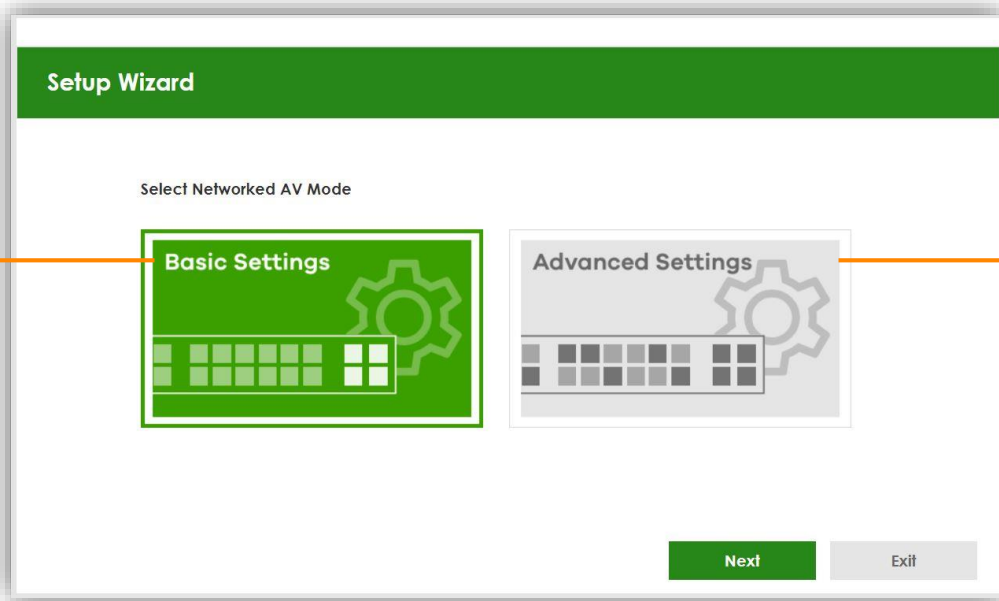


Networked AV Setup Wizard

There are 2 options for the setup wizard: basic settings and advanced settings. Choose the one which fits your applications before start.

Basic Settings

Simply click Next and go.



Advanced Settings

Ease the complex VLAN settings in one step.

Wizard Step 1 - Setup IP

1
STEP

IP

2 Password

3 Networked AV

4 Summary

Setup IP

Host Name:

IP Interface: ☐ Static IP Interface ☒ DHCP Client

VID:

IP Address:

IP Subnet Mask:

Default Gateway:

DNS Server:

Next

Cancel

Wizard Step 2 - Change Password

1 IP

2 Password

3 Networked AV

4 Summary

STEP

Change administrator's password and SNMP

It is recommended to change password and SNMP community string to avoid potential security breach.

Administrator's Password
Current password:
New password:
Confirm password:

SNMP
SNMP: ☐ Enabled ☒ Disabled
Version:
Get Community:
Set Community:
Trap Community:

Previous

Next

Cancel

Wizard Step 3 – Networked AV

If choose Basic Settings

For default IP / VLAN environment

1 IP

2 Password

3 STEP

Networked AV

4 Summary

Basic Settings

☐ Skip Networked AV Mode Settings

For better AVoIP performance, Management VLAN's IGMP snooping will be setup with the recommended setting, based on the following designated port arrangement.

Diagram illustrating the designated port arrangement for Networked AV:

- RJ45 Ports:** 1-24
- Combo/Fiber port:** 25
- Inter-switch Connection:** Connects the Combo/Fiber port of the ZYXEL switch to the Combo/Fiber port of 'Another Switch'.
- Transmitter (Tx):** Connected to RJ45 ports 1-12.
- Receiver (Rx):** Connected to RJ45 ports 13-24.

Buttons: Previous, Next, Cancel

If choose Advanced Settings

Flexible setting with IP and port assignment

1 IP

2 Password

3 STEP

Networked AV

4 Summary

Advanced Settings

Allocate networked AV service to a VLAN

Networked AV VLAN:

IP Address: (Optional)

IP Subnet Mask: (Optional)

Select Ports and Assign a Port Role

Select all ports ☐

2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29
☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

Buttons: Tx/Rx, Inter-switch, Management, Link aggregate

Buttons: Previous, Next, Cancel

Wizard Step 4 - Summary

1IP

2Password

3Networked AV

4STEP
Summary

Summary

Setup IP		Change administrator's password and activate SNMP		Networked AV - Basic Settings	
Host Name:	XGS2220	New password:		Networked AV VLAN:	1
IP Interface:	DHCP Client	SNMP:	Disabled	Networked AV VLAN IP:	10.32.56.22
VID:	1	Version:	v2c	IGMP Snooping:	Active
IP Address:	10.32.56.22	Get Community:	public	IGMP Snooping Querier:	Active
IP Subnet Mask:	255.255.255.0	Set Community:	public	Unknown Multicast Frame:	Drop
Default Gateway:	10.32.56.254	Trap Community:	public	Transmitter/Receiver	1-26
DNS Server:	8.8.8.8			Connected Port:	
				Inter-switch Connected Port:	27-30

Previous

Finish

Cancel

Basic Setting

Recommended settings will automatically be applied to Switch with simple clicks.

Networked AV Dashboard

Networked AV mode give you an instantly view of the current status, with a condensed function menu to help you maintain and configure with ease.

Port and
system status

Networked AV
status at a glance

Link information
for each port

